**SE868 and SL868**
Market Introduction Kit r.0

October 12th, 2011
Product Management EMEA

Telit SE868 and SL868.

Added value in Telit Portfolio:

- Companion GPS modules for Telit GSM/GPRS modules

- Compatible with V2 new generation platforms

- Standalone GPS, with A-GPS functionality and very low power consumption

- QFN packaging suitable for medium to high volume application (SE868)

- LCC packaging suitable for low volume application and manual/soldering reworking (SL868)
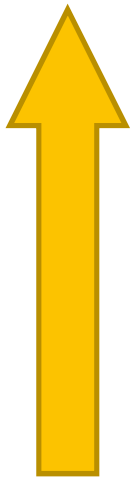
Telit philosophy applied on all products:

- Common footprint, compatibility over the years, reliable partner

- Provide the best technical support to integrators

- Develop custom features and products

Telit SE868 the new Telit GPS generation. Main Features.

Ultra Compact	
QFN Package	
High Sensitivity	
NMEA NMEA 0183	
< 2.5m Position Accuracy	
Low Power Consumption	
WAAS, EGNOS, MSAS and GAGAN capable	
48 Channel GPS Receiver	
A-GPS	
Ephemeris File Injection	
RoHS Compliant	
Extended Temperature Range	

Designed for:

• High sensitivity and low power GPS applications

Main characteristics:

• SiRF Star IV core
• Internal Flash memory
• Dimensions: 11 x 11 x 2.3 mm
• QFN Technology
• Voltage supply ranges: 1.75 – 1.9 VDC
• Current consumption:
  13mA Low Power Tracking
  36mA Hi Power Tracking
• Extended temperature ragne: -40 up to + 85
• High sensitivity for indoor reception, up to -163dBm
• 48-channel GPS architecture, Extremely fast TTFF at low signal levels
  - Hot start: 1s
  - Accuracy: < 2.5m (CEP50, autonomous acquisition)
• GPS NMEA 0183 output format
• Datum WGS84
• SBAS functionality
• AGPS functionality
• UART, IIC and SPI interface

Satellite

SE868
GPS Standalone
Embedded

RoHS Compliant

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Telit SL868 the new Telit GPS generation. Main Features.

Ultra Compact

LCC Package

High Sensitivity

NMEA NMEA 0183

< 2.5m Position Accuracy

Low Power Consumption

WAAS, EGNOS, MSAS and GAGAN capable

48 Channel GPS Receiver

A-GPS

Ephemeris File Injection

RoHS Compliant

Extended Temperature Range

Designed for:

• High sensitivity and low power GPS applications

Main characteristics:

• SiRF Star IV core
• Internal Flash memory
• Dimensions: 16 x 12 x 2.3 mm
• LCC Technology
• Voltage supply ranges: 2.8 – 3.6 VDC
• Current consumption:
  13mA Low Power Tracking
  36mA Hi Power Tracking
• Extended temperature ragne: -40 up to + 85
• High sensitivity for indoor reception, up to -163dBm
• 48-channel GPS architecture, Extremely fast TTFF at low signal levels
  - Hot start: 1s
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Satellite

SL868 GPS Standalone Embedded

RoHS Compliant

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Telit GPS modules (Pt.1).

SE868 and SL868 have the following key characteristics:

1. **Standalone (vs Host solution)**
   Standalone GPS modules works independently from GSM module or applciation uP (Micro Processor). So, standalone modules can run while GSM module or the application uP is in Power saving or in Power-OFF. On the contrary, Host GPS modules need an external uP in which GPS stack has to run, so GSM module or applciation uP cannot be in power saving when GPS is running.

2. **Flash based (vs Rom based version**)
   Flash based GPS modules can be SW upgraded. Moreover flash based GPS modules can use flash memory to store/acquire AGPS data, making GPS module independent from external aid. ROM based GPS modules cannot be upgraded but only patched at each power ON. A SW patch can be injected in the ROM-based GPS by GSM module or by uP after GPS Power-ON, but in this case GSM or uP must be ON during GPS power ON procedure. When ROM based GPS is switched off, al patches and ephemeris data are deleted. An external EEPROM can be added to store sw patch or ephemeris, but this solution is in change of final customer.

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Telit GPS modules (Pt.2).

3.Assisted GPS

Assisted GPS speeds up the TTFF(Time To First Fix) using external info coming from an external source. Typical application is the injection of ephemeris file, self generate (CGEE) or Server generated (SGEE). The availability of a on-board EE file generator is an alternative beside the classic Server Generated EE.

4.Advanced Power modes

The availability of sophisticated low power modes enables modules to keep and track position and dynamic parameters with less power consumption. Simplest GPS modules are not able to do it since they have only Full power and Off status modes. Advanced power modes allow superior performances in power consumption and battery saving while keeping in the same time reliable position data.

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Conclusion.

Telit SL868

Telit SE868 is the perfect solution for low power consumption positioning applications. It features a state-of-the-art 48-channel GPS receiver with Assisted GPS, active jammer remover and compact QFN (Quad Flat No lead) package. Its advanced power management and assisted GPS features (SBAS, CGEE, SGEE) allows to maximize performances even in low power condition. Its LCC packaging is ideal for low, medium and high volume application and when manual soldering/reworking is a key element.

Main features:

- One of the Smallest standalone GPS flash solution module
- LCC package 24 pads, 16 x 12.2 x 2.3 mm
- Voltage supply 2.8 – 3.6 VDC
- Several power modes for optimized power consumption
- High sensitivity Assisted A-GPS receiver, up to -163 dBm.
- Very low current consumption:
  - 10 mA in Idle @ Trickle power mode (tracking @ 1Hz)
  - 32 mA in Full power Navigation mode
- UART, SPI and I2C interface
- internal LNA.
- SBAS supported
- Self generated 3-day extended ephemeris
- Firmware and Ephemeris via UART and stored in internal flash memory
- Extended temperature range -40 to +85°C

Target Market:

- Extremely compact positioning applications
- Tracking and tracing
- Wireless + GPS combo applications

Conclusion.

Telit SE868

Telit SE868 is the perfect solution for low power consumption positioning applications. It features a state-of-the-art 48-channel GPS receiver with Assisted GPS, active jammer remover and compact QFN (Quad Flat No lead) package. Its advanced power management and assisted GPS features (SBAS, CGEE, SGEE) allows to maximize performances even in low power condition. Its QFN packaging is suitable for medium and high volume applications.

Main features:

- One of the Smallest standalone GPS flash solution module
- QFN package 32 pads, 11 x 11 x 2.3 mm
- Voltage supply 1.75 – 1.9 VDC
- Several power modes for optimized power consumption
- High sensitivity Assisted A-GPS receiver, up to -163 dBm.
- Very low current consumption:
    - 10 mA in Idle @ Trickle power mode (tracking @ 1Hz)
    - 37 mA in Full power Navigation mode
- UART, SPI and I2C interface
- internal LNA.
- SBAS supported
- Self generated 3-days extended ephemeris
- Firmware and Ephemeris via UART and stored in internal flash memory
- Extended temperature range -40 to +85°C

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